

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for hiding authentication data within a multimedia data stream having a first media channel and a second media channel, the method comprising the steps of:

obtaining a first set of authentication data;

said first set of authentication data being based on data contained in the first media channel;

obtaining a second set of authentication data;

said second set of authentication data being based on data contained in the second media channel;

hiding the first set of authentication data in the first media channel and the second media channel; and

hiding the second authentication data in the first media channel and the second media channel,

wherein an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region.

2. (Original) The method of claim 1 further including the steps of:
defining a first subset of authentication data;
hiding the first subset in a first region of the second media channel, the first region having a first data hiding capacity;
defining a second subset of authentication data; and
hiding the second subset in a second region of the second media channel, the second region having a second data hiding capacity.

3. (Original) The method of claim 1 further including the step of generating an identification mark for the first media channel based on a signature of the first media channel, the identification mark defining the first set of authentication data and enabling synchronization between the first media channel and the second media channel.

4. (Original) The method of claim 1 further including the step of generating an authentication value for the first media channel, the authentication value defining the first set of authentication data.

5. (Original) The method of claim 4 further including the steps of:
calculating a one way hash value for the first media channel; and
mapping the hash value onto an identification mark for the first media channel.

6. (Original) The method of claim 1 further including the step of obtaining an active data stream, the active data stream having executable content and defining the first set of authentication data.

7. (Original) The method of claim 6 further including the step of obtaining a control data stream, the control data stream further defining the first set of authentication data.

8. (Original) The method of claim 7 further including the step of using two-dimensional checksum error correction to generate the first set of authentication data.

9. (Original) The method of claim 7 further including the step of using multi-dimensional checksum error correction to generate the first set of authentication data.

10. (Canceled)

11. (Original) The method of claim 1 further including the step of generating the first set of authentication data based on data contained in the second media channel.

12. (Original) The method of claim 11 further including the step of embedding the first set of authentication data in the first media channel.

13. (Original) The method of claim 1 wherein the multimedia data stream has a third media channel, the method further including the step of hiding the first set of authentication data in the third media channel.

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Previously Presented) The method of claim 1, wherein the multimedia data stream has a third data channel, the method further including the steps of:

obtaining a third set of authentication data;

said third set of authentication data being based on data contained in the third media channel;

hiding the third set of authentication data in the first media channel and the second media channel; and

hiding the first set of authentication data and the second set of authentication data in the third media channel.

20. (Previously Presented) The method of claim 19, wherein the multimedia data stream is a video data stream, the first data channel is a video channel, the second data channel is an audio channel, and the third data channel is a text channel, the method further comprising the step of synchronously hiding authentication data obtained from each data channel of the multimedia data stream in every other data channel of the multimedia data stream.

21. (Previously Presented) The method of claim 1, further comprising the step of synchronously hiding authentication data obtained from all data channels of the multimedia data stream in every, individual data channel of the multimedia data stream.

22. (Currently Amended) A method for hiding authentication data within a multimedia data stream having a first media channel, a second media channel, and a third media channel, the method comprising the steps of:

obtaining a first set of authentication data;

said first set of authentication data being based on data contained in the first media channel;

obtaining a second set of authentication data;

said second set of authentication data being based on data contained in the second media channel;

obtaining a third set of authentication data;

said third set of authentication data being based on data contained in the third media channel;

hiding the first set of authentication data in the second media channel;

hiding the second set of authentication data in the first media channel;

hiding the third set of authentication data in the first media channel and the second media channel; and

hiding the first set of authentication data and the second set of authentication data in the third media channel,

wherein an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region.

23. (Previously Presented) The method of claim 22, wherein the multimedia data stream is a video data stream, the first data channel is a video channel, the second data channel is an audio channel, and the third data channel is a text channel, the method further comprising the step of synchronously hiding authentication data obtained from each data channel of the multimedia data stream in every other data channel of the multimedia data stream.

24. (Previously Presented) The method of claim 22, further comprising the step of synchronously hiding authentication data obtained from all data channels of the multimedia data stream in every, individual data channel of the multimedia data stream.

25. (Previously Presented) The method of claim 22, further including the steps of:

defining a first subset of authentication data;

hiding the first subset in a first region of the second media channel, the first region having a first data hiding capacity;

defining a second subset of authentication data; and

hiding the second subset in a second region of the second media channel, the second region having a second data hiding capacity.

26. (Previously Presented) The method of claim 22 further including the step of generating an identification mark for the first media channel based on a signature of the first media channel, the identification mark defining the first set of authentication data and enabling synchronization between the first media channel and the second media channel.

27. (Previously Presented) The method of claim 22 further including the step of generating an authentication value for the first media channel, the authentication value defining the first set of authentication data.

28. (Previously Presented) The method of claim 27 further including the steps of:

calculating a one way hash value for the first media channel; and
mapping the hash value onto an identification mark for the first media channel.

29. (Previously Presented) The method of claim 22 further including the step of obtaining an active data stream, the active data stream having executable content and defining the first set of authentication data.

30. (Previously Presented) The method of claim 29 further including the step of obtaining a control data stream, the control data stream further defining the first set of authentication data.

31. (Previously Presented) The method of claim 30 further including the step of using two-dimensional checksum error correction to generate the first set of authentication data.

32. (Previously Presented) The method of claim 30 further including the step of using multi-dimensional checksum error correction to generate the first set of authentication data.

33. (Previously Presented) The method of claim 22 further including the step of generating the first set of authentication data based on data contained in the second media channel.

34. (Previously Presented) The method of claim 33 further including the step of embedding the first set of authentication data in the first media channel.

35. (Previously Presented) The method of claim 22 wherein the multimedia data stream has a third media channel, the method further including the step of hiding the first set of authentication data in the third media channel.

36. (Currently Amended) A method for hiding authentication data within a multimedia data stream having a first media channel and a second media channel, the method comprising the steps of:

obtaining a first set of authentication data;

said first set of authentication data being based on data contained in the first media channel;

obtaining a second set of authentication data;

said second set of authentication data being based on data contained in the second media channel;

hiding the first set of authentication data in the first media channel and the second media channel;

hiding the second authentication data in the first media channel and the second media channel; and

synchronously hiding authentication data obtained from all data channels of the multimedia data stream in every, individual data channel of the multimedia data stream,

wherein an active data stream is inserted into a high capacity region of a visual channel, while other control data are embedded into a relatively high robustness region of the visual channel, the high capacity region having higher capacity and lower robustness than the high robustness region.